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(71) Applicants (for all designated States except US): THE GOVERNMENT OF THE UNITED STATES OF AMERICA as represented by THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES [US/US]; National Institutes of Health, Office of Technology Transfer, 6011 Executive Boulevard, Suite 325, Rockville, MD 20852-3804 (US). CDG RESEARCH CORPORATION [US/US]; 140 Webster Street, Bethlehem, PA 18015 (US). CDIC, INC. [US/US]; 4514 Chamblee Dunwoody Road, Suite 218, Atlanta, GA 30338 (US).

(72) Inventors; and

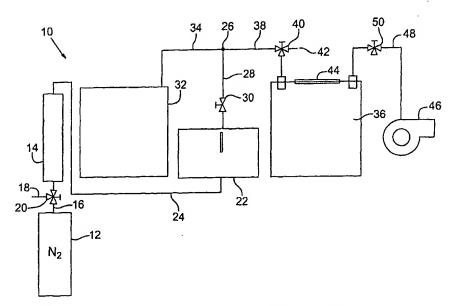
(75) Inventors/Applicants (for US only): WILSON, Deborah, E. [US/US]; 7927 Tire Swing Road, Dunn Loring, VA 22027 (US). LOCK, Katherine, K. [US/US]; 8006

Rising Ridge Road, BethesdA, MD 20817 (US). CO-HEN, Murray, L. [US/US]; 3740 Hulen Park Drive, Fort Worth, TX 76109 (US). MCWHORTER, Thomas [US/US]; 2977 Fairfield Drive, Allentown, PA 18103 (US). ROSENBLATT, Aaron, A. [US/US]; 21 West 86th Street, Apartment 1502, New York, NY 10024 (US). TRAUM, Theodore, J. [US/US]; 5105 Rae Court NE, Rio Rancho, NM 87144 (US).

- (74) Agent: RYBAK, Sheree, Lynn; Klarquist Sparkman, LLP, One World Trade Center, Suite 1600, 121 SW Salmon Street, Portland, OR 97204 (US).
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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR BIOWEAPON DECONTAMINATION



(57) Abstract: The present disclosure relates to the decontamination of articles contaminated (or thought to be contaminated) with bioweapons, such as methods and apparatus for decontaminating articles contaminated with sporulated bioweapons. In some embodiments, the methods are methods of decontaminating an environment, for example a room or building contaminated with a bioweapon.

FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

of inventorship (Rule 4.17(iv))

Published:

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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 15 June 2006

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According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED							
Minimum do A61L	ocumentation searched (classification system followed by classification system)	tion symbols)					
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched							
Electronic d EPO-In	ala base consulted during the international search (name of data b	ase and, where practical, search terms us	ed)				
C DOCUMI	ENTS CONSIDERED TO BE RELEVANT						
Category *	Citation of document, with indication, where appropriate, of the re	levant passages	Relevant to claim No.				
X .	WO 03/059401 A (CDG TECHNOLOGY, ROSENBLATT, AARON A; MCWHORTER, 24 July 2003 (2003-07-24) the whole document	INC; THOMAS E)	24-38				
X	US 4 681 739 A (ROSENBLATT ET Al 21 July 1987 (1987-07-21) the whole document	.)	24-38				
X .	EP 0 159 660 A (THE SCOPAS TECH COMPANY, INC; JOHNSON & JOHNSON) 30 October 1985 (1985-10-30) the whole document	IOLOGY .	24-38				
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			4				
X Funt	ner documents are listed in the continuation of box C.	Y Patent family members are liste	ad in annex.				
T later document published after the international filling date or priority date and not in conflict with the application but clied to understand the principle or theory underlying the invention							
"E" earlier document but published on or after the International liling date "L" document which may throw doubts on priority clairn(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means							
"P" document published prior to the international filing date but later than the priority date claimed "%" document member of the same patent family							
Date of the actual completion of the international search Date of mailing of the international search report 10 November 2005 Date of mailing of the international search report							
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NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Connor, M					

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C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.	
Α	KNAPP J E ET AL: "CHLORINE DIOXIDE AS A GASEOUS STERILANT" MEDICAL DEVICE AND DIAGNOSTIC INDUSTRY, CANON COMMUNICATIONS, SANTA MONICA, CA, US, September 1986 (1986-09), pages 48-51, XP001153334 ISSN: 0194-844X the whole document		1-38	
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International application No. PCT/US2005/000766

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)					
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:					
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:					
Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:					
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).					
Box III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)					
This international Searching Authority found multiple inventions in this international application, as follows:					
. see additional sheet					
1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.					
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.					
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:					
A. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-20, 24-38					
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.					

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-20,24-38

Method and apparatus for decontaminating an article comprising (a) chlorine dioxide as active agent introduced into a chamber/environment; (b) (means for) humidification of said chamber; and (c) a vacuum generator.

2. claims: 21-23

Method for decontaminating a room or building comprising (a) chlorine dioxide as active agent introduced into a room/building/environment; and (b) humidification of said environment.

Information on patent family members

N....al Application No PCT/US2005/000766

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 03059401 A	24-07-2003	AU 2002365192 A1 GB 2397524 A	30-07-2003 28-07-2004
US 4681739 A	21-07-1987	NONE	
EP 0159660 A	30-10-1985	CA 1245034 A1 DE 3584027 D1 HK 12992 A JP 1876170 C JP 5086233 B JP 61033659 A SG 107491 G	22-11-1988 17-10-1991 21-02-1992 07-10-1994 10-12-1993 17-02-1986 14-02-1992